WHAT IS CLAIMED IS:

1. A method for producing a transgenic plant, which comprises:

(A) introducing a vector into a plant cell,

wherein the vector is a vector for gene introduction into a plant and comprises:

a desired gene, and

a selectable marker gene comprising a gene encoding an enzyme which synthesizes auxin from an auxin precursor;

(B) culturing the plant cell into which the genes are introduced by the vector, in the presence of an auxin precursor and/or an analogue thereof to thereby prepare a redifferentiated tissue, and detecting and selecting the redifferentiated tissues; and

(C) culturing the redifferentiated tissue selected in (B) to redifferentiate a plant individual.

2. The method according to claim 1,

wherein the auxin precursor and/or the analogue thereof is indoleacetamide and/or naphthaleneacetic acid amide, and

wherein the gene for synthesizing auxin from an auxin precursor is an indoleacetamide hydrolase, *iaaH*, gene.

3. The method according to claim 1, wherein the selectable marker gene comprising a gene encoding an enzyme for synthesizing auxin from an auxin precursor further comprises a cytokinin synthesis gene.

4. The method according to claim 3, wherein the cytokinin synthesis gene is an isopentenyl transferase, *ipt*, gene.

5. A vector for gene introduction into a plant, which comprises:

a desired gene, and

a selectable marker gene comprising an indoleacetamide hydrolase, *iaaH*, gene and an isopentenyl transferase, *ipt*, gene and being free of an tryptophan monooxygenase, *iaaM*, gene.